WHITE RIVER SHALE OIL CORPORATION

SUITE 500 PRUDENTIAL BUILDING, 115 SOUTH MAIN STREET
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November 18, 1982

Mr. James Smith
Utah Division of Oil, Gas, and Mining
4241 State Office Building
Salt Lake City, UT 84114

Attention: Mr. Tom Portle

Subject: White River Shale Oil Corporation's Application for 30 Additional Acres for WRSP Development

Dear Mr. Smith:

The White River Shale Oil Corportion (WRSOC) is developing the White River Shale Project (WRSP) under an approved Mining Permit and a reclamation bond which limit construction activities to 110 acres on Tracts Ua and Ub. WRSOC posted a bond for 110 acres based on the best available estimate of the area required to support Phase I construction through 1985. Strict limits of work were set for all areas of development in an effort to contain construction activity within the 110 acres. Concurrently, a Topsoil Management Plan was prepared, approved by the Division of Oil, Gas and Mining (DOGM), and implemented to direct topsoil salvage opertions in all disturbed areas and to provide a means of accounting for the topsoil resource.

All disturbed areas were surveyed during the week of October 18, 1982, to determine the exact acreage disturbed to date. The survey showed that 95.2 acres had been disturbed in some manner, either directly during earth moving operation or merely by the location of office trailers or other temporary facilities. The areas disturbed after the October 18 survey bring the total net construction related disturbance to 107.2 acres.

WRSOC has determined that additional acreage will be required to complete the pre-1986 development plans described in our Mining Permit Application. A separate request to DOGM for an additional 360 acres is being made under separate cover in conformance with Stipulation 1 of the Phase I White River Oil Shale Project Mining Permit. Additionally, WRSOC requests that DOGM approve a 30 acre expansion of the existing approved 110 acre work area which would become effective December 1, 1982. The areas included in the 30 acre expansion are shown on the enclosed maps and encompass sufficient area to (a) complete the solid waste landfill site preparation, (b) provide additional necessary work space for construction of the mine decline and (c) initiate work on the runoff retention dam. Please note that all areas outlined by yellow are areas which have already been disturbed, while those areas outlined in orange indicate the areas included in the 30 acre expansion request.

The 30 acres requested is the minimum amount of acreage necessary to assure the continued development of important aspects of the WRSP. There have been many factors contributing to our immediate need for 30 additional acres. While the scope of work for the first increment of Phase I (mine development) has not changed, our application and subsequent Mining Permit were based to a great degree upon preliminary design information and construction concepts. In certain instances, final designs required additional land for development. Also, as construction contractors were selected, minor design changes and construction plans increased disturbed acreage needs. Finally, and most significantly, our original limits of work were too restrictive. Our philosophy had been to control work limits parallel with, and very close to the construction activity. Due to the complex terrain that has not been possible in many areas. Thus, of necessity, significant additional land has been required to date and will continue to be required. However, WRSOC will continue to seek to minimize disturbances as much as reasonably possible.

Completion of the sanitary landfill is desirable because construction equipment is available on-site at this time, and an on-site disposal area is becoming increasingly important for the most efficient handling of solid waste. The road to the landfill site has been built and only an additional two acres need be disturbed to complete this important facility.

In the mine area there are a few small undisturbed areas adjacent to developed work sites which cannot be effectively avoided and are needed by Frontier-Kemper, our mine construction subcontractor, in order to proceed with decline development. At the portal these spaces will be used to store equipment and waste rock from the decline away from actual work areas. On the mesa above the decline portal, the original narrow corridor needs to be expanded to provide an adequate storage capacity for concrete aggregate, to assure safe manuevering of concrete trucks, and to provide a slightly larger work area for development of the ventilation raise. In the area of the electrical substation, the addition of more electrical equipment will require that this pad be expanded. A total of six additional acres will be sufficient for continued operations in the mine and substation area.

Work on the runoff retention dam must be initiated during December 1982 to assure the completion of dam construction by the end of Summer 1983. As you know, Frontier-Kemper is utilizing a road header machine to develop the production decline. The use of this machine is expected to expedite decline construction to the extent that Frontier-Kemper expects to encounter the Bird's Nest Aquifer sometime in September 1983. Consequently, it is very important to have the dam completed prior to this date in order to serve as a mine dewatering contingency.

The design of the runoff retention dam incorporates a clay core cutoff down to competent bedrock and a grout curtain to contain impounded water. An additional 22 acres are requested which encompasses areas necessary to excavate the cutoff trench and grout below the cutoff and

along the east and west dam abutments. Included in this total is approximately four acres for storage/disposal of excavated rock which is unsuitable for dam construction. Coffer dams will be constructed upslope of dam within existing disturbed areas to control waterflow down the drainage channel. As you know, additional areas will be required to complete the dam and those areas are included in WRSOC's separate request for additional acreage.

The original estimate of 21 acres for construction of the runoff retention dam was based on preliminary design information and estimated construction laydown areas. Now that the dam design is complete and actual construction requirements have been identified, WRSOC estimates that the limits of work will encompass 62 acres. The additional acreage accounts for considerably more excavation for the dam than originally estimated, as well as areas needed for a seepage collection pond, a spillway, permanent access roads to and around the dam, monitoring wells, and required construction laydown areas. An additional 16 acres will be required for storage/disposal of rock resulting from dam excavation which may be unsuitable for use in dam construction. The required work area has been squared off to provide enforceable limits of work.

It should be noted that the actual size of the dam and the capacity of the pond have not changed substantially from the conceptual design upon which the original 21 acre disturbance estimate was based. The dam and pond were designed to hold the 100 year storm (i.e., 3 inches in 24 hrs.) with approximately 6.5 ft. of freeboard. The retention dam will have a length of approximatey 620 feet, a height of 47.5 feet above bedrock, and a width of 20 feet at the top of the dam. The bottom of the dam varies in width along its length, with a maximum width of 320 feet. The holding pond, when filled to the 5180 foot contour level, will have 211 acre-feet of capacity, a total water surface area of 11 acres, and a maximum depth of 59 feet.

WRSOC has obtained a construction permit for the solid waste landfill from the Utah Bureau of Solid and Hazardous Waste. We have obtained approvals for the runoff retention dam from the Utah Bureau of Water Pollution Control and the Oil Shale Office. The State Engineer's approval of the dam is expected during the first week of December 1982. The BLM has indicated that a right-of-way for portions of the dam which will be located off-tract will be issued in the near future. BLM has also agreed to issue a Temporary Use Permit for those areas off-tract which will be affected during dam construction.

WRSOC has collected and stockpiled approximately 121,000 cubic yards of topsoil from the existing disturbed acreage. This includes approximately 16,000 acres of existing topsoil underlying the three longterm topsoil stockpiles. Based on topsoil isopach maps, WRSOC estimates that an additional 18,000 cubic yards will be collected and stockpiled from remaining areas within the runoff retention pond which has already been stripped of most topsoil identified on our isopach maps. Approximately 20,000 cubic yards are estimated to be available

within the 30 additional acres, primarily downstream of the dam. Consequently, WRSOC estimates that a total of 159,000 cubic yards of topsoil will be recovered. All recovered topsoil will be stored at three existing long term stockpiles. The existing stockpiled quantity and estimated remaining recoverable quantity are sufficient to reclaim 140 acres with a minimum topsoil depth of 8 inches. As indicated in WRSOC's Mining Permit Application, current research suggest that a topsoil layer of 8 to 10 inches is sufficient for plant establishment in most areas.

WRSOC currently has a $1.5 million reclamation bond with DOGM to cover the first 110 acres of disturbance. In addition, WRSOC has also posted a $1 million bond with the U.S. Department of the Interior pursuant to our Federal Lease. These two bonds will more than adequately cover the anticipated reclamation costs associated with the 140 acres of disturbance discussed above. Furthermore, WRSOC is currently in the process of calculating a reclamation bond for the additional 360 acres associated with our proposed ammended Mining Permit. This bond will become effective upon DOGM approval of WRSOC's ammended permit.

In conclusion, WRSOC seeks your expenditious approval of this request for 30 additional acres of disturbance so that we may continue with our scheduled construction and avoid costly delays. If you have any additional questions concerning this matter, please call me or Ralph DeLeonardis for assistance.

Sincerely,

James W. Godlove

J. W. Godlove, Director
Environmental Affairs

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